

REMARKS

Claims 1-10 are pending in the patent application. Claim 4 has been canceled without prejudice or disclaimer. Claims 1, 5 and 9 have been amended. No new matter has been added.

Dependent claim 4 is cancelled, and its limitations are inserted into its base claim, amended independent claim 1. Dependent claim 5 is amended to change its dependency from claim 4 to claim 3. No new matter is added.

Claim 1 is objected to because of the use of the word "it". Claim 1 has been amended to eliminate use of the word "it". No new matter is added.

Claims 1, 2 and 8 are amended to remove the "means" language, which is unnecessarily limiting.

Rejections under 35 U.S.C. 112

Claim 9 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite. Specifically, the Examiner cites the use of the word "optionally" as the source of the indefiniteness. Claim 9 is amended to remove the word "optionally" and further clarify what is meant by the term "it", as is done for the claim 1 objection. No new matter is added.

Rejections under 35 U.S.C. 102

Claims 1-6 are rejected under 35 U.S.C. 102(b) as being anticipated by U.S. Patent No. 2,226,491 ("Gustafson"). As amended, claim 1 contains elements and limitations not found in Gustafson. Specifically, claim 1 contains the limitation that the spring element is adapted to prevent the pre-stressing effect for the screw connection

being lost by virtue of changes in length thus ensuring sufficient frictional force to prevent the screw connection becoming unscrewed. This is not present in Gustafson.

To anticipate a claim, the reference must teach every element of the claim. "A claim is anticipated only if each and every element as set forth in the claim is found, either expressly or inherently described, in a single prior art reference." *Verdegaal Bros. v. Union Oil Co. of California*, 2 USPQ2d 1051, 1053 (Fed. Cir. 1987). "The identical invention must be shown in as complete detail as is contained in the ... claim." *Richardson v. Suzuki Motor Co.*, 9 USPQ2d 1913, 1920 (Fed. Cir. 1989). Therefore, all claim elements, and their limitations, must be found in the prior art reference to maintain a rejection based on 35 U.S.C. §102. Applicants respectfully submit that Gustafson does not teach every element of amended claim 1 and therefore fails to anticipate claim 1.

Dependent claims 2-6, which are dependent from independent claim 1, were also rejected under 35 U.S.C. §102(b) as being unpatentable over Gustafson. While Applicants do not acquiesce with the particular rejections to these dependent claims, it is believed that these rejections are moot in view of the remarks made in connection with independent claim 1. These dependent claims include all of the limitations of the base claim and any intervening claims, and recite additional features which further distinguish these claims from the cited references. Therefore, dependent claims 2-6 are also in condition for allowance.

Rejections under 35 U.S.C. 103

Claims 7-10 are rejected under 35 U.S.C. 103(a) as being unpatentable over Gustafson in view of eFunda (Objectives of Heat Treatment, 2001, NPL). As stated above, amended claim 1 contains a limitation not found in Gustafson, namely that the spring element is adapted to prevent the pre-stressing effect for the screw connection being lost by virtue of changes in length thus ensuring sufficient frictional force to prevent the screw connection becoming unscrewed. This limitation is not suggested or taught by Gustafson or eFunda, taken alone or in combination.

Gustafson discloses a self-locking screw having a plurality of independent and symmetrical locking portions at the bottom of the head. The prior art document teaches that a binding and locking action through the resiliency of these portions is achieved in that the portions will "dig into" the article to which the screw or bolt is being attached, thus preventing unscrewing rotation and locking the screw or bolt (see col. 1, lines 15-24 and 30-38).

Such digging-in will have a detrimental effect since it may produce chips or swarfs when digging into the supporting surface which are undesirable e.g. when using the screw for attaching components of electronic circuits or the like. Further, such digging-in will cause an adverse effect for the function of the screw element as claimed because it will lead to a change in length of the screw connection and thus not allow to maintain the pre-stressing of the screw connection.

The screw as claim in amended claim 1 does not provide a locking action by a "dig in"-procedure. The technical concept proposed by the invention is not based on a form-locking mechanism but rather provides a reliable frictional-locking action by maintaining the pre-stressing effect of the screw connection even in cases where changes in length of the screw connection occur, e.g. by setting effects.

Furthermore, Gustafson does not disclose any screw head with a circular spring element formed as a ring with an angular work piece contact. Gustafson only discloses screw heads having a plurality of radially extending portions, which are separated by slots between them. This arrangement is essential for the mode of operation of the screw according to Gustafson because a screw head with a spring element formed as a circular ring (as in FIGS. 1-4 of the current application) would not provide a binding and locking action as taught by Gustafson.

Three criteria must be met to establish a *prima facie* case of obviousness. First, there must be some suggestion or motivation, either in the references themselves or in the knowledge generally available to one of ordinary skill in the art, to modify the reference. Second, there must be a reasonable expectation of success. Finally, the prior art reference, or combination of references, must teach or suggest all the claim limitations. MPEP § 2142. Applicant respectfully traverses the rejection since the prior

art fails to disclose all the claim limitations and there would be no motivation to combine the references as proposed by the Examiner.

Dependent claims 7-10, which are dependent from independent claim 1, were also rejected under 35 U.S.C. §103(a) as being unpatentable over Gustafson in view of eFunda. While Applicants do not acquiesce with the particular rejections to these dependent claims, it is believed that these rejections are moot in view of the remarks made in connection with independent claim 1. These dependent claims include all of the limitations of the base claim and any intervening claims, and recite additional features which further distinguish these claims from the cited references. Therefore, dependent claims 7-10 are also in condition for allowance.

CONCLUSION

In view of the amendments and reasons provided above, it is believed that all pending claims are in condition for allowance. The amendments clarify the patentable invention without adding new subject matter. Applicant respectfully requests favorable reconsideration and early allowance of all pending claims.

If a telephone conference would be helpful in resolving any issues concerning this communication, please contact Applicant's attorney of record, Michael B. Lasky at (952) 253-4106.

Respectfully submitted,

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